
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=7; day=16; hr=13; min=20; sec=4; ms=144;]

Validated By CRFValidator v 1.0.3

Application No: 10553869 Version No: 2.0

Input Set:

Output Set:

Started: 2008-06-13 16:40:14.201 **Finished:** 2008-06-13 16:40:28.694

93

Elapsed: 0 hr(s) 0 min(s) 14 sec(s) 493 ms

Total Warnings: 93
Total Errors: 0

No. of SeqIDs Defined: 93

Actual SeqID Count: Error code Error Description W 213 Artificial or Uni

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Input Set:

Output Set:

Started: 2008-06-13 16:40:14.201 **Finished:** 2008-06-13 16:40:28.694

Elapsed: 0 hr(s) 0 min(s) 14 sec(s) 493 ms

Total Warnings: 93

Total Errors: 0

No. of SeqIDs Defined: 93

Actual SeqID Count: 93

Error code Error Description

This error has occured more than 20 times, will not be displayed

SEQUENCE LISTING

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Met Gl 1	y ser	IIe	5	GTĀ	Arg	ile	TTE	10	GIY	HIS	GIU	AIA	Lуs 15	Pro
_														
His Se	r Arg		Tyr	Met	Ala	Tyr	Leu	Met	Ile	Trp	Asp	Gln	Lys	Ser
		20					25					30		
Leu Ly	s Ara	Cvc	Glv	Glv	Phe	.								
_						ьeu	Ile	Gln	Asp	Asp	Phe	Val	Leu	Thr
	35	Суз	011	1	1110	Leu 40	Ile	Gln	Asp	Asp	Phe 45	Val	Leu	Thr
	35	Cys	011	1	1110		Ile	Gln	Asp	Asp		Val	Leu	Thr
	35	Cys	017	1	1110		Ile	Gln	Asp	Asp		Val	Leu	Thr
Ala Al	a His				Ser	40				Thr	45			
Ala Al 50	a His					40					45			
	a His				Ser	40				Thr	45			
	a His	Cys	Trp	Gly	Ser 55	40 Ser	Ile	Asn	Val	Thr 60	45 Leu	Gly	Ala	His
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Asn Il	a His e Lys	Cys	Trp	Gly Glu 70	Ser 55 Pro	40 Ser	Ile	Asn	Val Phe 75	Thr 60	45 Leu Pro	Gly Val	Ala Lys	His Arg 80
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Asn Il	a His e Lys	Cys	Trp	Gly Glu 70	Ser 55 Pro	40 Ser	Ile	Asn	Val Phe 75	Thr 60	45 Leu Pro	Gly Val	Ala Lys	His Arg 80

Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln

110

Pro Leu Arg I 115	Leu Pro Ser .	Asn Lys Ala 120	Gln Val Lys	Pro Gly Gln Thr 125						
Cys Ser Val A		Gly Gln Thr 135	Ala Pro Leu 140	Gly Lys His Ser						
His Thr Leu G	Gln Glu Val 1 150	Lys Met Thr	Val Gln Glu 155	Asp Arg Lys Cys						
Glu Ser Asp I	Leu Arg His	Tyr Tyr Asp	Ser Thr Ile	Glu Leu Cys Val 175						
	Glu Ile Lys 1 180	Lys Thr Ser 185	Phe Lys Gly	Asp Ser Gly Gly 190						
Pro Leu Val C	Cys Asn Lys '	Val Ala Gln 200	Gly Ile Val	Ser Tyr Gly Arg 205						
Asn Asn Gly M		Arg Ala Cys 215	Thr Lys Val	Ser Ser Phe Val						
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His His His										
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	Pro Tyr Met . 20	Ala Tyr Leu 25	Met Ile Trp	Asp Gln Lys Ser 30						

Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr

45

Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg 65 70 75 80 Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln 100 105 110 Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140 His Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys 150 155 160 145 Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 205 Asn Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val 210 215 220 His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His

His His His

225

<210> 3 <211> 243 <212> PRT <213> Artificial

230

235

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Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr
35 40 45

Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 50 60

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg 65 70 75 80

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln
100 105 110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125

Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140

Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175

Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly
180 185 190

Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 205 Asn Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val
210 215 220

His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His 225 230 235 240

His His His

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His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30

Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr
35 40 45

Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 50 55 60

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg
65 70 75 80

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Met Leu Leu Gl
n Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gl
n 100 105 110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125

Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140 His Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys 150 155 Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 Asn Asn Gly Met Pro Pro Arg Ala Ser Thr Lys Val Ser Ser Phe Val 210 215 220 His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His 230 235 His His His <210> 5 <211> 243 <212> PRT <213> Artificial <220> <223> Synthetic; pro-IEPD-GrB-H6 C228A <400> 5 Met Gly Ser Ile Glu Pro Asp Ile Ile Gly Gly His Glu Ala Lys Pro 5 10 His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30 Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr 35 40 45 Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 50 55 60

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg

65 70 75 80

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln
100 105 110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125

Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140

Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175

Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190

Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 205

Asn Asn Gly Met Pro Pro Arg Ala Ala Thr Lys Val Ser Ser Phe Val 210 215 220

His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His 225 235 240

His His His

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Leu Lys Arg 35	Cys Gly G	ly Phe Leu 40	ı Ile Gln	Asp Asp	Phe Val 45	Leu Thr	<u>-</u>
Ala Ala His 50		55		60			
Asn Ile Lys	7	0		75		80	
Pro Ile Pro	85	-	90			95	
Met Leu Leu Pro Leu Arg	100		105	-	110		
115 Cys Ser Val		120)	_	125		
130 His Thr Leu	_	135		140			
145 Glu Ser Asp	1	50		155		160)
Gly Asp Pro	165 Glu Ile L	ys Lys Thi	170	Lys Gly	Asp Ser	175	<i>!</i>
Pro Leu Val	180 Cys Asn L	ys Val Ala	185 a Gln Gly	Ile Val	190 Ser Tyr	Gly Arc	J
195 Asn Asn Gly		200 ro Arg Ala		Lys Val	205 Ser Ser	Phe Val	L
210		215		220			

His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His

225 230 235 240

His His His

<210> 7

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<400> 7

Met Gly Ser Ile Glu Pro Asp Ile Ile Gly Gly His Glu Ala Lys Pro 1 5 10 15

His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30

Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr 35 40 45

Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 50 60

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg 65 70 75 80

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln
100 105 110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125

Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140

Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 Asn Asn Gly Met Pro Pro Arg Ala Val Thr Lys Val Ser Ser Phe Val 215 220 His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His 230 235 225 His His His <210> 8 <211> 243 <212> PRT <213> Artificial <220> <223> Synthetic; pro-IEPD-GrB-H6 C228F <400> 8 Met Gly Ser Ile Glu Pro Asp Ile Ile Gly Gly His Glu Ala Lys Pro 1 5 10 15 His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr 35 40 45 Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 55 Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg

75

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile

85 90 95

65

Met Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln 105 Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125 Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140 His Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys 150 155 160 Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 200 205 195 Asn Asn Gly Met Pro Pro Arg Ala Phe Thr Lys Val Ser Ser Phe Val 210 215 220 His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His